

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

----- In the Matter of -----)
)
PUBLIC UTILITIES COMMISSION)
)
Instituting a Proceeding)
to Investigate Performance-)
Based Regulation.)
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DOCKET NO. 2018-0088

ORDER NO. 35411

INSTITUTING A PROCEEDING TO INVESTIGATE
PERFORMANCE-BASED REGULATION

PUBLIC UTILITIES
COMMISSION

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By this Order, the Public Utilities Commission ("commission") institutes a proceeding to investigate the economic and policy issues associated with performance-based regulation ("PBR") for the Hawaiian Electric Companies.¹

I.

INTRODUCTION

Hawaii's electric power industry is in the midst of a significant transition from predominantly centralized fossil-fuel-based generation systems towards increasingly

¹The Hawaiian Electric Companies ("HECO Companies" or "Companies") refers to Hawaiian Electric Company, Inc. ("HECO"), Hawaii Electric Light Company, Inc. ("HELCO"), and Maui Electric Company, Ltd. ("MECO").

distributed and renewable generation systems. This transition includes the incorporation of large amounts of variable renewable generation resources, distributed energy resources ("DER"), including demand response resources, and a considerable focus on enhancing customer choice. The State of Hawaii is committed to supporting this transition, and has adopted several laws and policies requiring reductions in fossil-fuel use and greenhouse gas emissions, including a Renewable Portfolio Standard ("RPS") goal of 100% by the year 2045.²

In response to this dynamic and evolving landscape, the State's electric utilities are undertaking substantial efforts to adapt system operations, engineering, and planning. These adaptations, in turn, are evolving the role of the electric utility in certain respects, including the type of operations and services provided, the proportion of utility-owned versus contracted-for generation resources, and the nature of the utilities' relationship with customers.

The commission has acknowledged that the factors driving this energy transition are of sufficient breadth and magnitude that Hawaii's regulatory framework must also continue to evolve to enable the State's electric utilities to meet these new challenges,

²See Hawaii Revised Statutes ("HRS") § 269-92.

maintain safety and reliability, offer new opportunities to create value for customers, and result in affordable rates.

PBR enables regulators to reform legacy regulatory structures to enable innovations within modern power systems. An old regulatory paradigm built to ensure safe and reliable electricity at reasonable prices from capital-intensive electricity monopolies is now adjusting to a new era of disruptive technological advances that change the way utilities make money and what value customers expect from their own electricity company.³ PBR attempts to address some of the issues and disincentives inherent in traditional cost-of service regulation ("COSR") through a set of alternative regulatory mechanisms intended to focus utilities on performance and alignment with public policy goals, as opposed to growth in capital investments or other traditional determinants of utility earnings under COSR.

Well-designed PBR frameworks should result in an incentive structure that encourages exemplary utility performance irrespective of the nature of its investments (e.g., investment in

³See David Littell, Camille Kadoch, Phil Baker, Ranjit Bharvirkar, Max Dupuy, Brenda Hausauer, Carl Linvill, Janine Migden-Ostrander, Jan Rosenow, Wang Xuan, Owen Zinaman, and Jeffrey Logan, Next-Generation Performance-Based Regulation: Emphasizing Utility Performance to Unleash Power Sector Innovation, Regulatory Assistance Project and National Renewable Energy Laboratory, September 2017 ("Littell et al. Next-Gen PBR Report"), available at <https://www.nrel.gov/docs/fy17osti/68512.pdf>.

capital expenditures verses investment in efficiency measures). By providing rewards for specific outcomes and objectives, a PBR framework should provide a utility with the opportunity to earn fair compensation, based on a business model that is well aligned with the public interest. As demonstrated by experience in other jurisdictions, PBR can provide a variety of benefits, including: advancing regulatory goals; providing utilities with increased flexibility, opportunity, and accountability to pursue identified goals; and freeing up limited regulatory resources to focus on overseeing utility success in achieving public priorities.⁴

The commission notes that the current regulatory framework in Hawaii has already evolved beyond traditional COSR, to include certain PBR components that were implemented in various proceedings over the past decade. Nevertheless, additional adjustments may be necessary going forward, given changing customer preferences, State policy goals, and the ongoing evolution of the electric power industry.

In opening this investigative proceeding, the commission intends to set the foundation for a continued successful

⁴See, e.g., Melissa Whited, Tim Woolf, and Alice Napoleon, Utility Performance Incentive Mechanisms: A Handbook for Regulators, Synapse Energy Economics, Inc., March 2015, available at http://www.synapse-energy.com/sites/default/files/Utility%20Performance%20Performance%20Incentive%20Mechanisms%2014-098_0.pdf, ("Synapse Handbook for Regulators"), at 1.

relationship between the HECO Companies and its customers by holistically assessing and evaluating the current regulatory framework to ensure that the various regulatory mechanisms in place today are working efficiently, in concert, and as intended. Informed by stakeholder feedback, the commission expects to refine or modify the present regulatory framework so that it better aligns the HECO Companies' interests with the public interest in this new and changing environment. More specifically, the commission seeks to examine revenue and incentive mechanisms that encourage exemplary utility performance as well as PBR elements that may, over time, result in more fundamental changes to the regulatory framework. In general, the commission is interested in PBR mechanisms that result in:

- Greater cost control and reduced rate volatility;
- Efficient investment and allocation of resources regardless of classification as capital or operating expense;
- Fair distribution of risks between utilities and customers; and
- Fulfillment of State policy goals.

The instant proceeding will be bifurcated into two phases. Phase 1 of this docket will comprehensively evaluate and assess the current regulatory framework in Hawaii to examine which incentive mechanisms and regulatory components may not be

functioning as intended or are no longer aligned with the public interest, and to identify specific areas of utility performance that should be targeted for improvement. In Phase 2, the commission intends to work collaboratively with stakeholders to: streamline and/or refine elements of the existing regulatory framework; develop incentive mechanisms to better address specific objectives or areas of utility performance; and explore regulatory frameworks that result in more incentive-neutral utility investment decisions between capital- and service-based solutions.

II.

AUTHORITY

The commission initiates this investigation pursuant to HRS §§ 269-6 & -7. HRS § 269-7 states, in relevant part:

(a) The public utilities commission and each commissioner shall have the power to examine the condition of each public utility, the manner in which it is operated with reference to the safety or accommodation of the public, the safety, working hours, and wages of its employees, the fares and rates charged by it, the value of its physical property, the issuance by it of stocks and bonds, and the disposition of the proceeds thereof, the amount and disposition of its income, and all its financial transactions, its business relations with other persons, companies, or corporations, its compliance with all applicable state and federal laws and with the provisions of its franchise, charter, and articles of association, if any, its classifications, rules, regulations, practices, and service, and all matters of

every nature affecting the relations and transactions between it and the public or persons or corporations.

.

(c) Any investigation may be made by the commission on its own motion, and shall be made when requested by the public utility to be investigated, or by any person upon sworn written complaint to the commission, setting forth any prima facie cause of complaint. A majority of the commission shall constitute a quorum.

HRS § 269-7(a) and (c) (emphasis added). Similarly, HRS § 269-6 vests the commission with "general supervision . . . over all public utilities."⁵

In setting forth the general powers and duties of the commission, HRS § 269-6 lists specific considerations for the commission's review. HRS § 269-6 states, in relevant part:

(b) The public utilities commission shall consider the need to reduce the State's reliance on fossil fuels through energy efficiency and increased renewable energy generation in exercising its authority and duties under this chapter. In making determinations of the reasonableness of the costs of utility system capital improvements and operations, the commission shall explicitly consider, quantitatively or qualitatively, the effect of the State's reliance on fossil fuels on price volatility, export of funds for fuel imports, fuel supply reliability risk, and greenhouse gas emissions. The commission may determine that short-term costs or direct costs that are

⁵The commission's investigatory authority is also set out in HRS § 269-15 and Hawaii Administrative Rules ("HAR") § 6-61-71.

higher than alternatives relying more heavily on fossil fuels are reasonable, considering the impacts resulting from the use of fossil fuels.

(c) In exercising its authority and duties under this chapter, the public utilities commission shall consider the costs and benefits of a diverse fossil fuel portfolio and of maximizing the efficiency of all electric utility assets to lower and stabilize the cost of electricity. Nothing in this section shall subvert the obligation of electric utilities to meet the renewable portfolio standards set forth in section 269-92.

(d) The public utilities commission, in carrying out its responsibilities under this chapter, shall consider whether the implementation of one or more of the following economic incentives or cost recovery mechanisms would be in the public interest:

(1) The establishment of a shared cost savings incentive mechanism designed to induce a public utility to reduce energy costs and operating costs and accelerate the implementation of energy cost reduction practices;

(2) The establishment of a renewable energy curtailment mitigation incentive mechanism to encourage public utilities to implement curtailment mitigation practices when lower cost renewable energy is available but not utilized through the sharing of energy cost savings between the public utility, ratepayer, and affected renewable energy projects;

(3) The establishment of a stranded cost recovery mechanism to encourage the accelerated retirement of an electric utility fossil fuel electric generation plant by allowing an electric utility to

recover the stranded costs created by early retirement of a fossil generation plant; and

(4) The establishment of differentiated authorized rates of return on common equity to encourage increased utility investments in transmission and distribution infrastructure, discourage an electric utility investment in fossil fuel electric generation plants to incentivize grid modernization, and disincentivize fossil generation, respectively.

HRS § 269-6(b), (c) and (d) (emphasis added).

III.

NAMED PARTIES

The commission names HECO, HELCO, and MECO individually as Parties to this proceeding. In addition, the DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS, DIVISION OF CONSUMER ADVOCACY ("Consumer Advocate"), is an ex officio party to this proceeding, pursuant to HRS § 269-51 and HAR § 6-61-62(a).

The commission recognizes that KAUAI ISLAND UTILITY COOPERATIVE ("KIUC") is an "electric cooperative," as defined in HRS § 269-31(c). Because of its existing ownership structure as a member-owned, non-profit electric utility cooperative, the commission determines, at this time, that the application of the Times Interest Earned Ratio methodology to KIUC is unlikely to present the same potential risks to KIUC's customers as

compared to those present for customers of for-profit, investor-owned utilities like the HECO Companies. As such, pursuant to HRS § 269-31(b), unless otherwise determined by the commission, KIUC is hereby waived from involvement in this proceeding.

IV.

DISCUSSION

A.

Overview of Cost of Service Regulation and Performance-based Regulation Frameworks

1.

Traditional Cost of Service Regulation

The guiding principles animating public utility regulation, whether traditional or performance-based, include establishing reasonable, affordable rates, maintaining reliable service and customer satisfaction, and meeting public policy goals. With the traditional COSR framework, utility rates are set to allow electric utilities a reasonable opportunity to recover the costs incurred to provide general service, including a return on investment. An electric utility realizes earnings through a rate of return on the utility's capital investments, provided the regulator finds those capital investments were just and reasonable. Because earnings are tied

to capital investments, COSR encourages electric utilities to increase these investments, thereby increasing the utility's associated return on investment. This incentive, in turn, presents a key challenge for regulators: ensuring utility capital expenditures are just and reasonable.

In practice, utilities under COSR have successfully provided reliable service while affording regulated utilities a reasonable opportunity to ensure their financial integrity; however, COSR is not without its drawbacks. The traditional regulatory model for electric utilities, in which the electric utility earns a return on its investments in the system based largely on the cumulative depreciated cost of the prudent infrastructure it has deployed, may exert an "infrastructure bias" to deploy capital-intensive solutions.⁶ This occurs because the primary financial means through which the utility can grow its business and enhance earnings for shareholders is to invest in additional capital projects.

Indeed, the electric utility, beyond expanding its rate base, has limited earnings opportunities within a traditional COSR framework. Generally, rates do not provide for earnings on utility operation and maintenance expenditures, or for the cost of

⁶See Harvey Averch and Leland L. Johnson, Behavior of the Firm Under Regulatory Constraint, THE AM. ECON. REV. 1052-1069 (1962).

purchased power. There are few financial incentives for the utility to employ cost-savings measures, to reduce electricity sales, to improve energy efficiency, to increase customer choice, to integrate customer-sited generation, or to establish new and innovative services, except to the extent that utility capital investment is required.⁷ The lack of financial incentives motivating utility investment in achieving these key outcomes adds to the challenge faced by regulators, who must find other means to ensure utility alignment with public policy and priorities.

Current trends in the electric power industry underscore the limitations of the traditional COSR framework. Indeed, the industry is in a significant period of transition, with technological advances, changing customer preferences, evolving markets, and shifting policy goals driving the need for changes to the regulatory environment and to the electric utility business model. Factors driving change in the industry include flat or declining retail sales, the shift from fossil-fuel based generation to renewable energy generation, innovation in energy efficiency, the increasing availability of customer-sited and distributed generation, growth in the breadth, depth and

⁷But see Steve Kihm, Janice Beecher, and Ronald Lehr, Regulatory Incentives and Disincentives for Utility Investments in Grid Modernization, FUTURE ELEC. UTIL. REG. NO. 8 (2017).

complexity of utility costs, as well as changing customer expectations.

In light of these fundamental changes, going forward, traditional COSR may no longer provide a regulatory incentive framework that is well aligned with public policy goals. Stated differently, traditional COSR may no longer properly incent the utility to adapt to the changing landscape, to meet the challenges of a renewable and distributed energy future, or to capitalize on the opportunities inherent to this transformation. Similarly, traditional COSR may not equip regulators with the most effective tools or mechanisms to ensure that the utility effectively adapts to these changes, challenges, and opportunities.

2.

Performance-Based Regulation

PBR includes a set of alternative frameworks and regulatory mechanisms intended to focus utilities on performance and desired outcomes, as opposed to simply growth in capital investments or other determinants of utility earnings under COSR. Well-designed PBR frameworks should result in an incentive structure that encourages exemplary utility performance irrespective of the nature of its investments (e.g., investment in capital expenditures verses investment in measures by

a non-utility, third party). By providing rewards for specific outcomes and objectives, a PBR framework should provide a utility with the opportunity to earn fair compensation, based on a business model that is well aligned with the public interest.

PBR may be utilized to achieve broader, overarching objectives, such as: (1) incenting cost reduction; (2) incenting achievement of state and regulatory policy goals; (3) improving performance in areas that have previously been unsatisfactory; (4) integrating technological advances, such as advanced metering and demand response capabilities; (5) supporting new types of customer choice; and (6) encouraging a low-cost, customer-centric future. PBR also offers regulators a way to restructure utility financial incentives to achieve specific, identified desirable or beneficial outcomes, such as meeting renewable energy targets, reducing greenhouse gas emissions, or improving reliability and resilience.

A well-designed PBR framework should provide clear incentives for the utility to manage costs without compromising service; align financial incentives with the public interest; prevent gaming; and more fairly distribute risk between the utility and ratepayers. PBR is not a one-size-fits all construct designed uniformly wherever it is applied. Instead, PBR is made up of several elements, that can be applied in different ways and in different combinations, intended to strengthen utility

performance. Some of these mechanisms are applied as stand-alone elements in regulatory frameworks that are largely traditional. That said, PBR generally includes two critical components: (1) revenue adjustment mechanisms (e.g., multi-year rate plans, revenue decoupling); and (2) performance mechanisms (e.g., performance incentive mechanisms, benchmarking, earnings sharing mechanisms).⁸ These two, complementary components of PBR give utilities targets, a way to measure utility performance relative to the targets, and incentives to achieve the performance targets.

The most common approach to PBR worldwide is the multi-year rate plan ("MRP"), which combines a rate case moratorium with an attrition relief mechanism ("ARM")⁹ and could include some performance incentive mechanisms ("PIMs"). MRPs may also be deployed in conjunction with revenue decoupling (also known as revenue regulation), earnings sharing mechanisms ("ESMs"), and other techniques.

⁸Mark Newton Lowry, Tim Woolf, and Lisa Schwartz, Performance-Based Regulation in a High Distributed Energy Resources Future, FUTURE ELEC. UTIL. REG. No. 3 (2016) ("Lowry et al. PBR Technical Report"), at 1.

⁹An ARM is a common component of MRPs that automatically adjusts rates or revenues between rate cases to address cost pressures without closely tracking the utility's own cost. Methods used to design ARMs include forecasts and indexation to quantifiable cost drivers such as inflation and customer growth. See Lowry et al. PBR Technical Report, at vi.

The table below outlines a high-level conceptual framework for describing the prominent PBR elements as they pertain to two primary PBR categories described above, i.e., revenue adjustment mechanisms and performance mechanisms. The commission intends for this conceptual framework to provide a foundation for common understanding of PBR in this docket.

Table 1. General PBR Elements

Revenue Adjustment Mechanisms	
Multi-Year Rate Plan (MRP) and Attrition Relief Mechanism (ARM)	MRPs permit utilities to operate for several years without a general rate case. The rate case moratorium typically lasts three to five years.
	Between rate cases, ARMs automatically adjust rates or the revenue requirement according to a predetermined formula that compensates a utility for cost pressures without tracking its actual cost. ARMs are commonly based on cost forecasts, indexed trends in utility costs, or a combination of the two. ¹⁰
Revenue Decoupling (Revenue Regulation)	Revenue decoupling (revenue regulation) eliminates the throughput incentive by ensuring the utility recovery of allowed revenue regardless of megawatt-hour (MWh) and megawatts (MW) of utility system use. Allowed revenue is typically escalated using a predetermined formula. Under this approach, the impact on utility revenues between rate cases from energy efficiency, demand response programs, and customer-sited distributed generation can be reduced or eliminated. ¹¹

¹⁰Lowry et al. PBR Technical Report at 2.

¹¹Lowry et al. PBR Technical Report at 2.

Earnings Sharing Mechanisms (ESMs)	ESMs divide surplus or deficit earnings between the utility and its customers, to provide customers with a share of savings achieved through operational efficiency or other measures, while maintaining utility incentives to pursue cost savings. Coupled with PIMs, ESMs can help guard against windfall profits for the utility that could result. ¹²
Performance Mechanisms	
Performance Incentive Mechanisms (PIMs)	PIMs consist of performance metrics, targets, and financial incentives. PIMs have been employed for many years to address performance in areas such as reliability, safety, and energy efficiency. In recent years, PIMs have received increased attention as a way to provide utilities with regulatory guidance and financial incentives regarding DER and the implementation of new technologies and practices. ¹³
Scorecards	Scorecard metrics permit the collection of information on utility performance or achievement of targets in specific areas compared to a peer group of other utilities. Typically, financial incentives are not initially linked to a scorecard, but scorecards can assist in defining baseline conditions and as a way to evaluate and measure changes to performance over time.

¹²Dan Cross-Call, Rachel Gold, Leia Guccione, Mike Hennen, and Virginia Lacy, Reimagining the Utility: Evolving the Functions and Business Model of Utilities to Achieve a Low-Carbon Grid, Rocky Mountain Institute, January 2018, available at http://www.rmi.org/reimagining_the_utility ("RMI Reimagining the Utility"), at 22.

¹³Lowry et al. PBR Technical Report at 2.

PBR Frameworks in Other Jurisdictions

A number of jurisdictions in the United States and internationally have adopted PBR frameworks or components of PBR.¹⁴ Based on the implementation of PBR frameworks and/or components in other jurisdictions, when well-designed and well-executed, PBR can provide a host of benefits, including: advancing regulatory goals; providing utilities with increased flexibility, opportunity, and accountability to pursue identified goals; and freeing up limited regulatory resources to focus on overseeing utility success in achieving public priorities.¹⁵ On the other hand, implementation of regulatory reform is not without risk. With respect to PIMs, for instance, experience to date has shown that there are many potential pitfalls that regulators should be aware of, including: disproportionate rewards;

¹⁴See, e.g., Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Instituting Proceeding, State of New York Public Service Commission; Case No. 17-3142-PET, Order Opening Investigation, Request for Comments, and Notice of Workshop, State of Vermont Public Utility Commission; Docket Number E-002/CI-17-401, Minnesota Public Utilities Commission.

¹⁵See, e.g., Synapse Handbook for Regulators at 1.

unintended consequences; additional regulatory burden; unproductive risk; as well as gaming and manipulation.¹⁶

Careful consideration of the potential benefits, rewards, and risks of PBR will be central to this investigation. The commission intends to leverage the experience and insights of other jurisdictions, as captured by the growing body of literature in this space.¹⁷

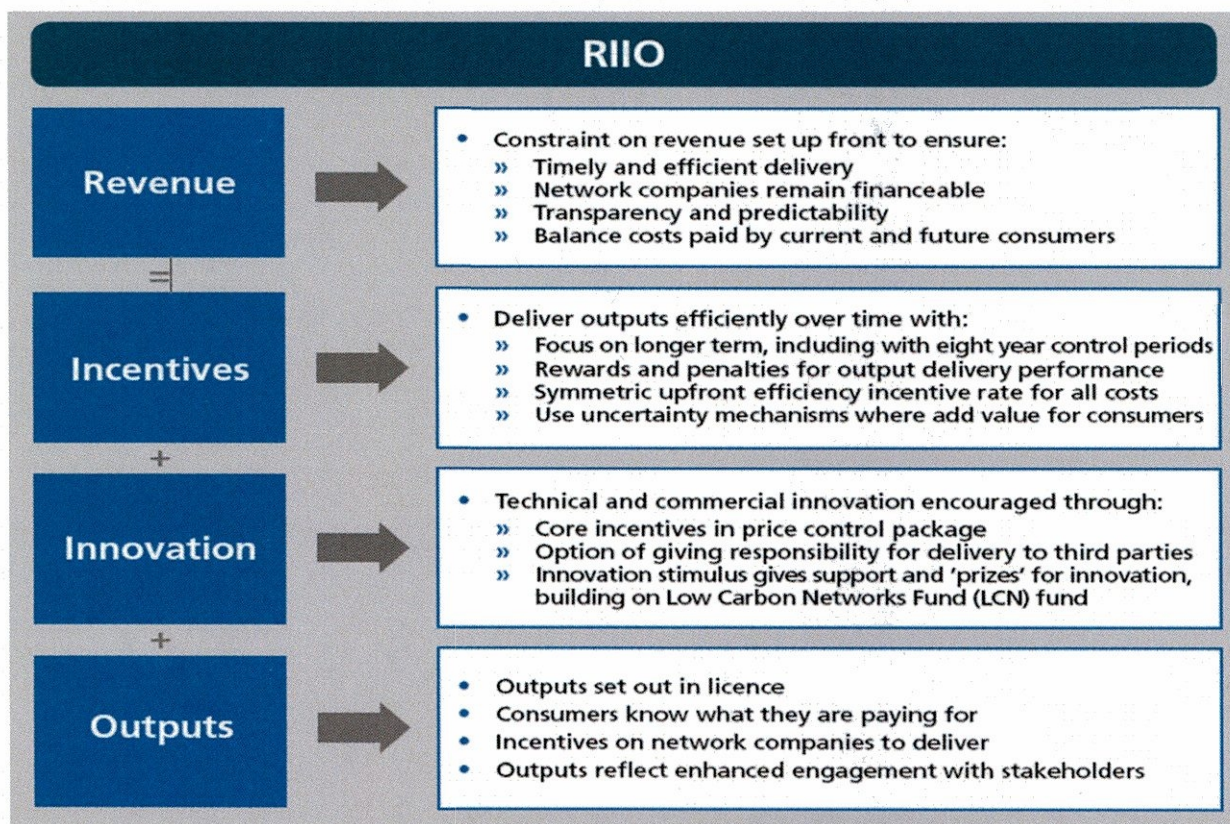
Some key examples of PBR implementation and examination include:

Great Britain's RIIO. RIIO is one of the best-known examples of PBR in practice. RIIO stands for

¹⁶See Synapse Handbook for Regulators at 2, 53 (California incentive payments for nuclear generation resulted in compensation roughly four times higher than wholesale power prices), 55 (New York eliminated penalty portion of energy efficiency incentives, citing *inter alia* substantial drain on staff and utility resources that could be better spent on program administration).

¹⁷See, e.g., Synapse Handbook for Regulators; Lowry et al. PBR Technical Report; RMI Reimagining the Utility; Littell et al. Next-Gen PBR Report; Advanced Energy Economy Institute, "Utility Earnings in a Service-Oriented World: Optimizing Incentives for Capital- and Service-Based Solutions," January 20, 2018, ("AEE Optimizing Incentives Report") available at https://info.aee.net/hubfs/AEE%20Institute_Utility%20Earnings%20FINAL_Rpt_1.30.18.pdf; Dan Aas and Michael O'Boyle, You Get What You Pay For: Moving Toward Value in Utility Compensation, Part 2 - Regulatory Alternatives, Energy Innovation and America's Power Plan, June 2016, available at http://americaspowerplan.com/wp-content/uploads/2016/08/2016_Aas-OBoyle_Reg-Alternatives.pdf.

"Revenue = Incentives + Innovation + Outputs" and is composed of a number of PBR mechanisms, including MRPs (eight-year "price control" periods), benchmarking, ESMs, and PIMs. The administration of these is interlaced and subject to significant regulatory review and negotiation between the regulator (Ofgem) and the regulated companies.¹⁸



Source: Michael Hogan, "What's Up in Europe?" The Regulatory Assistance Project, May 2014, at 5.

New York's Reforming the Energy Vision ("REV").

REV aims to establish utilities as Distribution System Platforms

¹⁸Ofgem Fact Sheet 117, March 2013. (<https://www.ofgem.gov.uk/ofgem-publications/64003/pricecontrolexplainedmarch13web.pdf>)

across which retail energy service providers and DER compete to meet customer needs, ensure system reliability and resiliency, and reduce emissions. A suite of PIMs, described as Earnings Adjustment Mechanisms ("EAMs") in New York, serve to link specific outcomes (e.g., system efficiency, customer engagement) with utility financial interests.¹⁹ The utility also stands to benefit from new forms of revenues associated with operation and facilitation of distribution-level services (i.e., Platform Service Revenues).²⁰ Metrics of interest to the utility and regulators, but which have no financial stake, are also being implemented (i.e., Scorecard Metrics) for transparency purposes, benchmarking opportunities, and/or to lead towards eventual inclusion in an EAM.

California's Pilot PIM. California initiated a regulatory incentive mechanism pilot in 2016 that specifically targeted DER.²¹ A pilot PIM was implemented, which refines COSR by allowing utilities a profit margin on certain expenses, if/when those expenses defer or displace capital expenditures.

¹⁹See Synapse Handbook for Regulators at 81-83.

²⁰See Synapse Handbook for Regulators at 81-83.

²¹California Public Utilities Commission, Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning and Evaluation of Integrated Distributed Energy Resources, Decision 16-12-036, Addressing Competitive Solicitation Framework and Utility Regulatory Incentive Pilot, filed December 15, 2016.

This mechanism aims to make a utility indifferent to whether it meets customer and grid needs through rate-based traditional infrastructure, or through third-party owned DER.

Minnesota's Investigation into Performance Metrics.

In September 2017, the Minnesota Public Utilities Commission opened a new proceeding (Docket No. 17-401) to develop performance metrics and related incentives for Xcel Energy.²² The Commission stated that it was interested in obtaining an understanding of how performance metrics and standards, and potentially incentives, could further align the focus of Xcel's management with the public interest, and that identifying what to measure or consider as indicators of utility performance is a key starting point.²³

The proceeding was staged into phases, with Phase One seeking stakeholder input on: (a) key goals for the electricity sector; (b) how performance against those goals is currently being measured; (c) which metrics or information should be used to determine whether the utility is meeting those key goals; and (d) what utility information or independent studies would aid in establishing achievable potential for performance against those

²²See In re Comm'n Investigation to Identify and Develop Performance Metrics and, Potentially, Incentives for Xcel Energy's Electric Utility Operations, Docket No. E-002/CI-17-401, filed September 22, 2017 ("Minnesota PUC Notice of Comment Period").

²³See Minnesota PUC Notice of Comment Period at 1-2.

key goals.²⁴ A future Phase Two will focus on how the performance measurements and standards developed in the first phase may be used or applied by the Commission, including possible standards or performance targets and the potential for using financial incentives to drive Xcel's performance.²⁵ Following an initial round of comments, the parties have engaged in a series of roundtable meetings convened by the Great Plains Institute to discuss performance-based metrics.²⁶

In addition to the examples above, various jurisdictions in the United States are exploring grid modernization and/or utility of the future studies. Many of these investigations include PBR as a key element within the broader examination.

Some examples include:

Rhode Island's Power Sector Transformation.

On March 2, 2017, Governor Gina Raimondo wrote to the Rhode Island Public Utilities Commission, the Office of Energy Resources, and the Division of Public Utilities and Carriers, asking the

²⁴See Minnesota PUC Notice of Comment Period at 2.

²⁵See Minnesota PUC Notice of Comment Period at 2.

²⁶See Letter From: Doug Scott To: Minnesota Public Utilities Commission, "Summary of e21 Roundtable Meetings convened by the Great Plains Institute In the Matter of a Commission Investigation to Identify and Develop Performance Metrics And, Potentially, Incentives for Xcel Energy Electric Utility Operations," Docket No. E-002/CI-17-401, filed March 6, 2018.

three agencies to collaborate in the development of a more dynamic regulatory framework that would enable the state and its utilities to advance a cleaner, more affordable, and reliable energy system for the 21st Century. The agencies submitted their Phase One "Power Sector Transformation" report in November 2017.²⁷ The report was divided into four discrete categories for which principles and recommendations were developed: (1) utility business model; (2) grid connectivity and functionality; (3) distribution system planning; and (4) beneficial electrification.²⁸

Implementation of the report's recommendations is now underway in utility rate cases and other dockets before the Rhode Island Public Utilities Commission.

Illinois' NextGrid. The Illinois Commerce Commission ("ICC") initiated, by resolution, a collaborative process called "NextGrid" in which the industry and other stakeholders can develop a shared base of information and work to build consensus on critical issues facing the electric utility industry now and as it

²⁷See Division of Public Utilities & Carriers, Office of Energy Resources, and Public Utilities Commission, Rhode Island Power Section Transformation: Phase One Report to Governor Gina M. Raimondo, November 2017 ("Rhode Island PST Phase One Report"), available at [http://www.ripuc.org/utilityinfo/electric/PST%20Report Nov 8.pdf](http://www.ripuc.org/utilityinfo/electric/PST%20Report%20Nov%208.pdf).

²⁸See Rhode Island PST Phase One Report at 13, 32, 43, and 56.

continues to rapidly transform.²⁹ A consumer-focused investigative study expected to last 18 months, NextGrid is the Illinois Utility of the Future Study to identify, research, and develop options to address issues facing Illinois' electric grid, its users, and the utilities who operate it. Among other things, the study will identify legal and regulatory revisions that may be needed to support grid modernization, optimize grid performance, spur innovation, and protect customers.

Ohio's PowerForward. In April 2017, the Public Utilities Commission of Ohio ("PUCO") launched PowerForward, an effort to study how Ohio could evolve its electrical grid, improve reliability and resilience, and incorporate new, innovative technologies in order to enhance the customer experience of all Ohio electricity customers.³⁰ In contrast to a typical commission docket, this initiative has called upon industry leaders to lead conversations before the PUCO, ranging from integrating DER into the evolving grid, to incorporating electric vehicles and their infrastructure onto the electric system, to redesigning Ohio's ratemaking,

²⁹See NextGrid: Illinois, "Chairman Brien Sheahan's Introduction to NextGrid Study," ("Chairman Sheahan's Intro to NextGrid") available at <https://nextgrid.illinois.gov/chairletter.pdf>.

³⁰See Public Utilities Commission of Ohio, "PowerForward," available at <https://www.puco.ohio.gov/industry-information/industry-topics/powerforward/>.

and rate design structure to inspire investments in innovative energy resources.

PowerForward has been broken into three phases: Phase 1, held over three days in April 2017, was coined "A Glimpse Into the Future"; Phase 2, held over three days in July 2017, focused on "Exploring Technologies"; and the most in-depth, Phase 3, spread out over two three-day sessions in March 2018, focused on "Ratemaking and Regulation."³¹

Phase 3 included a presentation on questions pertaining to business model reform, discussing ways for utilities to recover their costs for services, such as cloud computing, where utilities would traditionally not be able to earn a rate of return.³² It also touched on cost recovery frameworks that align the interests of utilities and customers so that utilities have a financial incentive to pursue DER and other service-based solutions rather than traditional poles-and-wires investments.³³ Principles of

³¹See Public Utilities Commission of Ohio, "PowerForward," available at <https://www.puco.ohio.gov/industry-information/industry-topics/powerforward/>.

³²See Matt Schilling, PowerForward, "Ratemaking and Regulation day five recap" ("PowerForward Day 5 Recap"), available at <https://www.puco.ohio.gov/industry-information/industry-topics/powerforward/phase-3-ratemaking-and-regulation/day-five-recap/>.

³³See PowerForward Day 5 Recap.

performance-based ratemaking and revenue decoupling were also discussed.³⁴

PUCO will announce the next steps of the PowerForward process in the near future.

This summary of ongoing active implementation and examination of PBR serves to underscore the commission's commitment to leverage "lessons learned" from efforts of other jurisdictions to advance the discussion of PBR for Hawaii's regulatory environment. These examples provide a foundation from which the commission, the HECO Companies, the Consumer Advocate, and other stakeholders may begin to tailor solutions to Hawaii's specific context.³⁵

³⁴See PowerForward Day 5 Recap.

³⁵The commission notes that this context includes a variety of parallel efforts, including, but not limited to, grid modernization, DER, Community-based Renewable Energy ("CBRE"), demand response ("DR"), and electrification of transportation ("EoT"). See also In re Public Util. Comm'n, Docket No. 2012-0036, Decision and Order No. 32052, filed April 28, 2014, Exhibit A, (commission's "Inclinations"), at 16 (noting the utility's traditional role in power supply is changing with high penetrations of renewable energy resources and the utility's role in energy delivery is evolving to effectively become that of a network systems integrator and operator).

B.

Background and Hawaii-specific Context

The convergence of factors driving fundamental change in the electric power industry are further amplified in Hawaii. Due, in part, to energy efficiency programs, standards, codes and customer-sited generation, the HECO Companies' retail sales have declined over the last decade.³⁶ In addition, given the State's 100% renewable portfolio standard, the Companies will need to transition completely from fossil-fuel based generation to renewables. Moreover, Hawaii's power sector has evolved new

³⁶In the Matter of the Application of Hawaiian Electric Company, Inc. For Approval of General Rate Case and Revised Rate Schedules and Rules, Docket No. 2016-0328, Electricity Sales and Customer Test Year Estimates, Testimony of Joanne Ide, Director of Forecasting Division - Hawaiian Electric Company, HECO-T-3, Submitted December 16, 2016, pages HECO-307 at 1, HECO-308 at 1, HECO-314 at 1; In the Matter of the Application of Maui Electric Company, Ltd. For Approval of General Rate Case and Revised Rate Schedules and Rules, Docket No. 2017-0150, Electricity Sales and Average Number of Customers, Testimony of Michael Ito, Director of Planning Division Customer Solutions & Planning Department - Maui Electric Company, MECO-T-3, Submitted October 12, 2017, pages MECO-307 at 1-3 and MECO 318 at 1-3; and In the Matter of the Application of Hawaiian Electric Light Company, Inc. For Approval of General Rate Case and Revised Rate Schedules and Rules, Docket No. 2015-0170, Electricity Sales and Customer Test Year Estimates, Testimony of Jon Hayashida, Forecast/Data Analyst, System Operations/System Planning Department - Hawaii Electric Light Company, HELCO-T-2, Submitted September 19, 2016, pages HELCO-T-2 at Executive Summary, HELCO-WP-203A at 1-2.

capabilities as a result of technological innovation in DER, energy management tools, energy efficiency, and energy storage.

In particular, the commission notes that DER penetration in the HECO Companies' service territories ranks among the highest in the world.³⁷ The Companies' operating philosophy and approach to DER needs to evolve over time to achieve the energy goals of the State in the most reliable, safe, and cost-effective manner, while still enabling customer choice and control. Increasingly, these customer-sited resources must be viewed as playing an integral role in the functioning of the electric grid and, in some circumstances, may be able to meet grid needs at a lower cost than traditional utility investments.

This reality stands somewhat in conflict with the incentives inherent in the State's existing regulatory framework, which is not incentive neutral with respect to DER because customer-sited resources have the potential to diminish utility rate base and increase operating expenses; outcomes that may ultimately decrease utility earnings. In contrast, PBR seeks to utilize both revenue adjustment mechanisms and performance

³⁷By the end of 2017, 20% of residential customers at both HECO and MECO and 16% of residential customers at HELCO had rooftop solar installed or approved for installation. See Hawaiian Elec. Co., Inc., News Release, January 18, 2018, available at <https://www.hawaiianelectric.com/2017-saw-big-surge-in-solar-installations>.

mechanisms to more strongly align utilities' incentives with customers' interests. For these reasons, among others, there is a need to further explore various PBR frameworks.

It is important to recognize that the instant docket represents a continuation of significant efforts, spanning many years, to evolve the regulatory framework in Hawaii. The commission views this proceeding as the next step in the evolution of Hawaii's regulatory framework.³⁸ As discussed below, the present regulatory framework for the HECO Companies already incorporates many elements of PBR that were initially proposed and reviewed in prior dockets. Notwithstanding these significant efforts, the commission intends to ensure that the existing suite of regulatory mechanisms do not work at cross purposes, and to examine whether additional refinements or modifications are necessary. In addition, the commission seeks to explore and develop new PBR frameworks, including PIMs, to further enhance the alignment between the Companies' financial interests and that of customers as well as public policy goals. In that regard, the commission intends to leverage the insights and contributions

³⁸The commission has previously discussed the potential need for policy and regulatory reforms to achieve Hawaii's clean energy future. See commission's Inclinations at 16-17; see also infra Section V.B.1 (outlining the history of Hawaii's evolving regulatory framework).

made by stakeholders in past dockets, as well as lessons learned from the implementation of PBR components to date.

1.

Discussion, Consideration, and Implementation of
PBR Components in Prior Proceedings

The commission first examined modifications to the traditional regulatory framework more than twenty years ago, considering proposals to implement specific components of PBR during the late 1990s. In 1996, the commission instituted a proceeding to investigate competition and possible restructuring options for Hawaii's regulated electric utilities.³⁹ In that proceeding, the HECO Companies supported several proposals to provide the potential benefits of competition as alternatives to more fundamental restructuring, including competitive bidding for new generation resources and a specifically defined PBR framework.⁴⁰ The commission, however, declined to adopt the

³⁹Docket No. 96-0493, Instituting a Proceeding on Electric Competition, Including an Investigation of the Electric Utility Infrastructure in the State of Hawaii, Order No. 15285, filed December 30, 1996.

⁴⁰See the Collaborative Report and Statements of Position by the Parties in Docket No. 96-0493, filed on October 19, 1998. The HECO Companies presented a specific PBR Framework described in detail in their Final Statement of Position, Attachment C, Performance-Based Regulation For Hawaiian Electric Company.

Companies' proposals at that time. Subsequently, in 1999, the HECO Companies filed an application requesting approval of a similar PBR framework intended to be implemented in the Companies' next respective rate cases.⁴¹

The PBR frameworks proposed by the HECO Companies in these two dockets (Docket Nos. 96-0493 and 99-0396) incorporated the following elements: (1) a fixed, multi-year interval between general rate cases; (2) an index-based price cap based on an annual gross domestic product price index (GDPPI) adjusted by a productivity factor; (3) an ESM; and (4) service quality PIMs with performance targets, "deadbands," and specified maximum rewards and penalties.⁴²

In 2010, after significant deliberation, the commission approved decoupling mechanisms for each of the HECO Companies.⁴³ These mechanisms, which include a Rate Adjustment Mechanism ("RAM") provision for each Company, were intended to incent the

⁴¹Docket No. 99-0396, Application, filed December 13, 1999.

⁴²The PBR proposals included PIMs for several aspects of service quality, including System Average Interruption Frequency Index ("SAIFI"), System Average Interruption Duration Index ("SAIDI"), call center performance and customer satisfaction (determined by survey).

⁴³In re Public Util. Comm'n, Docket No. 2008-0274, Final Decision and Order and Dissenting Opinion of Leslie H. Kondo, Commissioner, filed August 31, 2010 ("Decoupling Final D&O"), at 105.

HECO Companies, or remove their disincentive, to accept more renewable energy and pursue energy efficiency measures, consistent with, and in support of, the State's energy objectives.⁴⁴ The commission notes that the approved decoupling mechanisms, as amended and supplemented in later proceedings, currently incorporate some version of each of the elements initially proposed in Dockets Nos. 96-0493 and 99-0396.⁴⁵

Although PIMs were not explicitly identified as an issue in the Decoupling Investigation, several performance measures were proposed by the parties. While the commission declined to adopt a clean energy performance metric for the HECO Companies that had been discussed by the parties at that time, the commission acknowledged the importance of having clearly defined objectives and measurements of success.⁴⁶ The commission communicated its intent to revisit performance metrics at a later date, stating:

⁴⁴Decoupling Final D&O at 105.

⁴⁵A RAM Provision tariff has been in effect for each of the HECO Companies for several years, as approved by the commission in HECO's 2009 test year rate case, HELCO's 2010 test year rate case, and MECO's 2010 test year rate case. PIMs for all three Companies became effective January 1, 2018, by Order No. 35165, dated December 29, 2017, in Docket No. 2013-0141, including PIMs for SAIDI, SAIFI and Call Center Performance. A PIM for customer satisfaction determined by survey was considered, along with several PIMs proposed by other Parties in Docket No. 2013-0141, but were not approved, pending further examination.

⁴⁶Decoupling Final D&O at 105.

"in future reviews of the effectiveness of decoupling and its relationship with Hawaii's clean energy initiatives, the performance of the HECO Companies after decoupling is implemented, and the concept of performance metrics should be appropriately investigated to allow the commission to consider the need for such metrics in the future."⁴⁷

In 2013, the commission opened an investigation to reexamine the decoupling mechanisms ("Decoupling Reexamination Investigation"), in order to determine whether the mechanisms, particularly the RAM, were effectively serving their intended purposes, and were fair and in the public interest.⁴⁸ A major focus of the Decoupling Reexamination Investigation was on cost control, including the incentives inherent in the then-existing RAM provisions that appeared to encourage spending on baseline capital expenditures.

The commission identified the following general issues to be examined, which remain relevant today:

1. Fair allocation of risk and associated costs;
2. Incentives to control costs;
3. Performance incentives;

⁴⁷Decoupling Final D&O at 105.

⁴⁸In re Public Util. Comm'n, Docket No. 2013-0141, Order No. 31289, Initiating Investigation, filed May 31, 2013 ("Order No. 31289"), at 1, 11.

4. Incentives to make necessary and/or appropriate changes to utility strategic plans and action plans;
5. Administrative efficiency;
6. Appropriate interest rate for outstanding Revenue Balancing Account ("RBA") balance; and
7. Legislative guidance.⁴⁹

The commission bifurcated the decoupling reexamination into two distinct sets of issues, Schedule A and Schedule B, to be addressed sequentially.

Schedule A. After substantial review and input from the parties, the commission adopted a variety of metrics for tracking utility performance.⁵⁰ These were established as tracking-only metrics, without associated rewards or penalties.⁵¹ The Companies were required to post the Schedule A performance metrics on their respective websites with a link to the metrics on the website's homepage.⁵² These metrics included: reliability (i.e., SAIFI and

⁴⁹Order No. 31289 at 11-20.

⁵⁰In re Public Util. Comm'n, Docket No. 2013-0141, Decision and Order No. 31908, filed February 7, 2014 ("D&O 31908"), at 70-77 (commission also ordered the HECO Companies to make certain modifications to their decoupling mechanisms).

⁵¹See D&O 31908 at 70-77.

⁵²See D&O 31908 at 70-77; Docket No. 2014-0131, Order No. 32701, filed March 11, 2015.

SAIDI); generation availability (i.e., equivalent availability factor (EAF)⁵³, equivalent forced outage factor (EFOF)⁵⁴, and equivalent forced outage factor demand (EFORD)⁵⁵); clean energy metrics (i.e., renewable portfolio standard metric, system renewable energy metric, total renewable energy metric, net energy metering); and cost of final delivered energy to customers by rate class for each island system.⁵⁶

Schedule B. In Schedule B, the issues for consideration included (1) whether a cap on the RAM was appropriate; (2) whether PBR, incentive-based ratemaking, or any PIMs should be implemented; and (3) whether specific measures should be

⁵³EAF measures the percentage of time that a generating unit is available to generate electricity if called upon to operate. See Docket No. 2013-0141, "Hawaiian Electric Companies' Statement of Position; Exhibits 1-5; and Certificate of Service" ("HECO Companies' Schedule A SOP"), filed December 20, 2013, Exhibit 3, Attachment 2, at 1.

⁵⁴EFOF is a fraction of a given operating period in which a generating unit is not available due to forced outages and forced deratings. See HECO Companies' Schedule A SOP, Exhibit 3, Attachment 2, at 1.

⁵⁵EFORD is a measure of the portion of time a unit is in demand but is unavailable due to forced outages and forced deratings. See HECO Companies' Schedule A SOP, Exhibit 3, Attachment 2, at 1.

⁵⁶D&O 31908 at 74.

implemented to establish cost controls for baseline capital projects.⁵⁷

In Order No. 32735, the commission established a cap on annual RAM adjustments (the "RAM Cap"),⁵⁸ and distinguished between "PBR framework" proposals and "stand-alone" PIMs.

PBR frameworks. As described by the commission, PBR frameworks

constitute a wholesale change in the regulatory procedures and cost control incentive associated with the traditional ratemaking process by, among other things, allowing utilities to profit from realized cost efficiencies and establishing financial rewards or penalties based on utility performance according to specific incentive metrics.⁵⁹

PIMs. Standalone PIMs can provide financial rewards and/or penalties for utility performance according to specific metrics, without necessarily requiring a substantial change to other ratemaking procedures.⁶⁰

⁵⁷Docket No. 2014-0131, Order No. 32735, filed March 31, 2015 ("Order No. 32735"), at 15-16.

⁵⁸Order No. 32735 at 80-84.

⁵⁹Order No. 32735 at 38.

⁶⁰Order No. 32735 at 39.

The commission further delineated between "conventional" PIMs,⁶¹ designed to ensure quality of services to customers, and "energy policy" PIMs, designed to promote attainment of energy policy objectives.⁶²

At that time, the commission did not adopt a PBR framework or implement the proposed energy policy PIMs, but did recognize the value of conventional PIMs in conjunction with effective incentives to the utilities to reduce costs. Instead, the commission provided an extended procedural schedule and directed the parties to propose conventional, stand-alone PIMs, and to identify appropriate steps for Energy Cost Adjustment Clause ("ECAC") amendments.⁶³

In Order No. 34514, after carefully considering the parties' proposals, the commission (1) adopted several "backstop"

⁶¹The commission noted that most PBR frameworks incorporate conventional PIMs to ensure that the cost control incentives of the regulatory framework do not encourage the utility to obtain cost reductions by reducing the quality of services provided to customers. Conventional PIMs reward or penalize a utility based on performance according to one or more conventional service quality metrics. See Order No. 32735 at 40.

⁶²Order No. 32735 at 37-40.

⁶³Order No. 32735 at 114.

service quality PIMs, and (2) established guidelines for Major Project Interim Recovery ("MPIR").⁶⁴

Service Quality PIMs. In Order No. 34514, the commission found that the following PIMs were reasonable and beneficial for implementation: (1) System Average Interruption Duration Index ("SAIDI"); (2) System Average Interruption Frequency Index ("SAIFI"); and (3) Call Center Performance (Service Level).⁶⁵ After a number of iterations, the commission directed the Companies to file tariff sheets for the established PIMs and revised RBA with an effective date of January 1, 2018.⁶⁶

MPIR. The commission, in Order No. 34514, determined that the recovery of revenues for costs of Major Projects placed in service between general rate cases will be in accordance with the MPIR Guidelines set forth in Attachment A.⁶⁷ The MPIR is a reconciled cost recovery mechanism to provide opportunity for reasonable recovery of specifically

⁶⁴Docket No. 2013-0141, Order No. 34514, filed April 27, 2017 ("Order No. 34514"), at 119-121.

⁶⁵Order No. 34514 at 119.

⁶⁶Docket No. 2013-0141, Order No. 35165, filed December 29, 2017, at 6; Docket No. 2013-0141, "Hawaiian Electric Companies Revised Performance Incentive Mechanism and Revenue Balancing Account Tariffs," filed January 11, 2018.

⁶⁶Order No. 34514 at 120-121.

⁶⁷Order No. 34514 at 120-121.

allowed revenues for the net costs of approved eligible projects placed in service between general rate cases under circumstances wherein cost recovery is limited by a revenue cap and is not provided for by other effective recovery mechanisms.⁶⁸

The commission also stated an intention "to consider further measures to explicitly encourage utility performance improvements in other pending and/or upcoming dockets, including amendments to the utilities' existing energy cost adjustment mechanisms, establishment of energy policy and cost control PIMs, and implementation of a PBR framework."⁶⁹

2.

Current Regulatory Framework

The regulatory framework for the HECO Companies thus currently incorporates, in at least some form, several of the fundamental components ordinarily associated with PBR, including an MRP (fixed three-year cycle for general rate cases), an interim-period revenue adjustment mechanism subject to a revenue cap, a revenue decoupling mechanism, and an ESM. In addition, several PIMs are already in place, and others are

⁶⁸Order No. 34514, Attachment A, at 3.

⁶⁹Order No. 34514 at 4.

actively being contemplated, including PIMs rewarding successful implementation of new renewable programs⁷⁰ and procurement of utility-scale renewable generation.⁷¹

Stated simply, the current regulatory framework has meaningfully shifted away from traditional COSR and incorporates the following elements.

a.

Revenue Adjustment Mechanisms

Multi-Year Rate Plan. The HECO Companies are on fixed, three-year general rate case cycles.

Revenue Decoupling (Revenue Regulation) - RBA. The RBA is a sales decoupling component, intended to break the link between the HECO Companies' kilowatt-hour ("kWh") sales and their total electric revenue. In sum, under the RBA, the HECO Companies' revenues are delinked from sales by setting the target revenues to

⁷⁰See In re Hawaiian Elec. Co., Inc., Hawaii Elec. Light Co., Inc., and Maui Elec. Co., Ltd., Docket No. 2015-0412, Decision and Order No. 35238, filed January 25, 2018 ("DR Portfolio Decision and Order"), at 104-105.

⁷¹See In re Hawaiian Elec. Co., Inc., Hawaii Elec. Light Co., Inc., and Maui Elec. Co., Ltd., Docket No. 2017-0352, Order No. 35405 ("Order No. 35405"), filed April 6, 2018, at 37. The commission observes that several other concurrent initiatives (e.g., grid modernization, DER, and CBRE) may similarly benefit from an incentive structure that is appropriately aligned to address market improvements and potentially enhance operational efficiencies.

the most recent authorized revenues approved in the utility's most recent rate case. The RBA mechanisms ensure that each of the HECO Companies ultimately recover from customers no more and no less than approved "target" revenues regardless of sales, demand, or other revenue determinants between general rate cases. Accounting records associated with the RBA are maintained to record: (1) the difference between the utilities' target revenue and recorded adjusted revenue; and (2) monthly interest applied to the simple average of the beginning and ending month balances in the RBA.

Revenue Cap - RAM. The RAM is intended, via formula-driven estimates and escalators, to compensate the HECO Companies for increases in utility costs and infrastructure investment between rate cases and therefore reduce the frequency of rate cases. Allowed revenues are permitted to increase between general rate cases in accordance with provisions in the RAM tariffs for each of the HECO Companies. Within the limits of the RAM Cap, target revenues are allowed to increase as a sum of changes in several revenue components: (1) operation and maintenance ("O&M") expenses; (2) return and taxes on rate base; and (3) depreciation and amortization expense. The O&M component of allowed expenses increases in accordance with prescribed escalation formulas. Rate base and depreciation/amortization expenses are not capped individually, but are subject to the overall RAM Cap.

Exceptions to limitations by the RAM Cap may be allowed on a case-by-case basis in accordance with MPIR guidelines. In sum, the components of the HECO Companies' revenue requirements that are subject to annual update and escalation through the RAM include the revenue requirements associated with: (1) changes in designated labor and non-labor O&M and payroll tax expenses; (2) the return on incremental investment in designated rate base components; (3) updated depreciation and amortization expenses; and (4) changes in costs due to significant changes in tax laws or tax regulations.

Earnings Sharing Revenue Credits. Incorporated into the RAM and operating as an ESM, Earning Sharing Revenue Credits are the amounts to be returned to customers as credits through the RBA provision, so as to implement the earnings sharing percentages and procedures described in the table below.

ROE at or below the Authorized ROE	Retained entirely by shareholders - no customer credits
First 100 basis points (1%) over Authorized ROE	25% share credit to customers
Next 200 basis points (2%) over Authorized ROE	50% share credit to customers
All ROE exceeding 300 basis points (3%) of Authorized ROE	90% share credit to customers

b.

Incentive Mechanisms

Performance Incentive Mechanisms ("PIMs").

Service Quality (Traditional) PIMs.

SAIFI is the measure of the average frequency of outages, defined as the annual total number of customer interruptions divided by the total number of customers served. The maximum penalty amount was determined to be equal to 0.20% of Common Equity Share of Approved Average Test Year Rate Base determined in the most recent interim or final order in a general rate case for each Company.

SAIFI

Performance Target	1.116 interruptions per customer during the one-year Evaluation Period
Deadband	±0.090 interruptions (1 Standard Deviation)
Range for no penalty	1.026 interruptions to 1.206 interruptions per customer (± 1 Standard Deviation from Target)
Rewards	Not Applicable
Penalties	For greater than 1.206 interruptions per customer
Maximum Reward Amount	Not Applicable
Maximum Penalty Amount	\$2,039,094

SAIDI is the measure of the average duration of outage defined as the sum of all customer interruption durations (in minutes) divided by the total number of customers served. The maximum penalty amount was determined to be equal to 0.20% of Common Equity Share of Approved Average Test Year Rate Base determined in the most recent interim or final order in a general rate case for each Company.

SAIDI

Performance Target	99.03 minutes per outage
Deadband	± 9.07 minutes (1 Standard Deviation)
Range for no penalty	89.96 minutes to 108.10 minutes per outage (± 1 Standard Deviation from Target)
Rewards	Not Applicable
Penalties	For greater than 108.10 minutes per outage
Maximum Reward Amount	Not Applicable
Maximum Penalty Amount	\$2,039,094

Call Center PIM. Measures the performance of the utility call center in terms of the percentage of calls answered within 30 seconds. The magnitude of the maximum reward amount and maximum penalty amount were determined to be equal to 0.08% of Common Equity Share of Approved Average Test Year Rate Base determined in the most recent interim or final order in a general rate case for each Company.

Call Center PIM

Performance Target	79.07% of calls answered within 30 seconds
Deadband	+/- 3.00% of calls within 30 seconds
Range for no reward of penalty	76.07% of calls answered to 82.07% of call answered
Rewards	Apply for greater than 82.07% of calls answered
Penalties	Apply for less than 76.07% of calls answered
Maximum Reward Amount	\$815,638
Maximum Penalty Amount	\$815,638

Targeted Energy Policy PIMs.

DR Portfolio Program Launch. The commission intends to establish an initial, one-time performance incentive related to the timely acquisition of cost-effective DR from third-party aggregators. For cost-effective MWs acquired, enrolled, and operational by December 31, 2018, the Companies shall receive a one-time performance incentive equivalent to up to 5% of the aggregate annual contract value, subject to a cap of \$500,000.⁷²

DR Portfolio. Longer-term, the commission has also stated an intention to consider different performance incentives to inform and reward beneficial DR Portfolio outcomes.⁷³

Renewables Procurement. The commission established a shared-savings performance incentive mechanism for Phase 1 of the

⁷²DR Portfolio Decision and Order at 104-105.

⁷³DR Portfolio Decision and Order at 104-105.

HECO Companies' ongoing competitive procurement for renewable generation, which is the subject of Docket No. 2017-0352.⁷⁴ The incentive is based on an 80% customer / 20% utility split of the estimated first-year savings from each power purchase agreement entered into by the HECO Companies, subject to commission approval, compared to benchmarks established by considering recent low-cost renewable energy projects, up to a cap of \$3,500,000.⁷⁵ Any performance incentive provided under this mechanism will be split into two allocations - the first shortly after approval of the PPAs, and the second following the first year of commercial operation of projects, subject to limitations regarding the actual amount of energy utilized by the Companies for each of the PPAs approved by the commission.⁷⁶

c.

Fuel and Purchased Power Expense

Energy Cost Adjustment Clause ("ECAC"). Each of the HECO Companies has a fuel cost adjustment mechanism that adjusts for short-term historical fuel prices and purchased energy expenses. Fuel expense recovery for utility-owned generation

⁷⁴See Order No. 35405 at 37.

⁷⁵Order No. 35405 at 11.

⁷⁶Order No. 35405 at 14.

units is adjusted for actual fuel price using a formula which allows a straight pass-through of fuel expense within an operating efficiency "deadband" and provides financial rewards and penalties for thermodynamic operating efficiencies greater or lower (respectively) than the deadband. Purchased energy expense (wholesale electricity purchased from independent power producers) is a straight pass-through.⁷⁷

Purchased Power Adjustment Clause ("PPAC").

Purchased capacity expense (fixed charges associated with purchased power from independent power producers) is recovered as a straight pass-through (see HRS § 269-16.22).

⁷⁷At this time, the commission is considering changes or modifications to ECAC in the ongoing HECO general rate case. See In re Hawaiian Elec. Co., Inc., Docket No. 2016-0328, Order No. 35372, filed March 29, 2018, at 8.

Hawaii-specific PBR Elements (April 2018).

Revenue Adjustment Mechanisms	
Multi-Year Rate Plan (MRP) and Attrition Relief Mechanism (ARM)	The HECO Companies are on MRPs ; fixed, 3-year general rate case cycles.
	The RAM is intended, via formula-driven estimates and escalators, to compensate the HECO Companies for increases in utility costs and infrastructure investments between rate cases and therefore reduce the frequency of rate cases. Allowed revenues are permitted to increase between general rate cases in accordance with provisions in the RAM tariffs for each of the HECO Companies.
Revenue Decoupling (Revenue Regulation)	The RBA is a sales decoupling component, intended to break the link between the HECO Companies' kWh sales and their total electric revenue. In sum, under the RBA, the HECO Companies' revenues are delinked from sales by setting the target revenues to the most recent authorized revenues approved in the utility's most recent rate case.
Earnings Sharing Mechanisms (ESMs)	Incorporated into the RAM, Earning Sharing Revenue Credits are the amounts to be returned to customers as credits through the RBA provision so as to implement the established earnings sharing percentages and procedures.
Performance Mechanisms	
Performance Incentive Mechanisms (PIMs)	<p>Service Quality PIMs: SAIFI; SAIDI; and Call Center</p> <p>Targeted Energy Policy PIMs: DR Portfolio Launch (one-time); DR Portfolio (long-term); Renewables Procurement</p>

Notwithstanding the incorporation of these PBR components and PIMs into the present regulatory framework, the past decade has seen continued transition within Hawaii's electric power industry and the decades to come are likely to see even greater changes. The commission believes Hawaii's regulatory framework must continue to evolve along with these changes. The commission notes that the HECO Companies' PSIP,⁷⁸ the Grid Modernization Strategy,⁷⁹ the DR Portfolio,⁸⁰ Community-Based Renewable Energy,⁸¹ and the ongoing DER programs⁸² all involve ambitious goals associated with the ongoing transformation in Hawaii's electric power industry, and success in realizing those goals will depend, to some degree, upon the existence of a supportive regulatory framework that adequately aligns the HECO Companies' interests with their customers' interests.

⁷⁸See Docket No. 2014-0183.

⁷⁹See Docket No. 2017-0226.

⁸⁰See Docket No. 2015-0412.

⁸¹See Docket No. 2015-0389.

⁸²See Docket No. 2014-0192.

V.

PRELIMINARY SCOPE AND PROPOSED PROCESS

As described in the previous section, Hawaii's current regulatory framework continues to evolve from traditional COSR. In this investigative proceeding, the commission will assess how well aligned the current regulatory framework is with the State's policy goals and emerging trends in the electric sector. The commission intends to provide a forum by which to evaluate the current regulatory environment; identify which elements, if any, may not be adequately aligned with the public interest; and collaboratively develop modifications or new components to better align utility and customer interests. More specifically, the commission intends to explore, and provide opportunities for stakeholders to propose, a broad range of PBR frameworks and mechanisms. The commission views this docket as the next step in Hawaii's evolving regulatory environment, part of a progression of steps intended to better align the utilities' financial interests with the public interest.

This section sets forth a preliminary, high-level scope and process for the instant docket to seek stakeholder feedback on the same. By subsequent order, the commission, informed by stakeholder comments, will provide a more detailed statement of issues and procedural schedule to govern this proceeding.

In general, the commission is interested in ratemaking elements and/or mechanisms that result in:

- Greater cost control and reduced rate volatility;
- Efficient investment and allocation of resources regardless of classification as capital or operating expense;
- Fair distribution of risks between utilities and customers; and
- Fulfillment of State policy goals.

The commission envisions that the PBR components examined through this investigation are those that: (a) target areas of current utility performance that may benefit from improvement; and (b) reward the utility for achieving specific outcomes that are in the public interest and/or penalize the utility for not achieving said outcomes. To that end, through this investigation, the commission intends to: (1) identify specific areas of utility performance that should be improved; (2) determine appropriate metrics for measuring successful outcomes in those areas; and (3) establish reasonable financial rewards and/or penalties that are sufficient to incent the utility to achieve those outcomes.

The commission intends to utilize a two-phase process.

A.

Phase 1 - Evaluation and Assessment

In Phase 1, the commission intends to examine the current regulatory framework and identify those areas of utility performance that are deserving of further focus for PBR framework development and/or PIMs in Phase 2. Topics open for exploration in Phase 1 could include, inter alia:

1. Aside from reasonable, affordable rates, and reliable customer service and satisfaction, what are additional key goals for which performance incentives should be developed?
2. What targets or priority areas of utility performance should be measured and reported to the commission? Why should these areas be measured, and why are they important to the public interest?
3. With respect to specific targets or priority areas, how should performance be measured? To the extent these priority areas are already measured, do the currently employed measurements or evaluations adequately evaluate the utility's performance in these areas?
4. How can the measurement or evaluations of specified areas of utility performance be cost-effectively verified?

The commission anticipates that Phase 1 will involve an evaluation and assessment of the current regulatory framework, including which components are aligned with customer interests and functioning as intended and which are not, with the goal of identifying specific mechanisms that require

modification/refinement, as well as specific areas of utility performance that should be addressed further.

The commission outlines the following high-level preliminary procedural schedule for Phase 1:

Convening Phase 1 Order. The commission, by subsequent order, will outline a statement of issues to govern Phase 1, establish a procedural schedule, and set forth details governing stakeholder processes.

Stakeholder Process. Phase 1 will commence with one or more informal technical conference(s) or stakeholder workshop(s). Informal dialogue should provide a valuable forum for stakeholders to participate in constructive conversation pertaining to: (1) aspects of the current regulatory framework that are functioning well; (2) aspects of the current regulatory framework that may need improvement; (3) areas of utility performance that should be measured; and (4) the manner in which utility performance measurement should occur.

Limited Discovery and Statements of Position. The commission anticipates providing for limited discovery followed by Parties' Statements of Position ("SOPs").

Phase 1 Decision and Order. Upon review of the Phase 1 record, the commission anticipates issuing an order that further distills the issues, focusing the Parties' efforts on specific regulatory mechanisms and areas of utility performance to be

addressed in Phase 2. More specifically, the Phase 1 Decision and Order is expected to: (1) identify specific areas of utility performance that should be improved; and (2) determine appropriate metrics for measuring successful outcomes in those areas.

The commission expects Phase 1 to conclude in approximately nine months.

B.

Phase 2 - Design and Implementation

Having identified the specific areas of utility performance that should be improved, as well as the attendant metrics for measuring successful outcomes in those areas, Phase 2 will focus on refinement and/or modifications to the existing regulatory framework that will incent the utility to achieve those outcomes. The commission anticipates that Phase 2 will take approximately twelve months.

Phase 2 issues for consideration could include, inter alia: (a) energy policy PIMs; (b) mechanisms to encourage the pursuit of cost-effective, service-based solutions;⁸³ and (c) differentiated authorized rates of return on equity, consistent with commission authority set forth in HRS § 269-6(d)(4). In addition, depending on the areas identified

⁸³See, e.g., AEE Optimizing Incentives Report.

in the Phase 1 assessment, Phase 2 issues for consideration could also include longer-term, more strategic changes to the regulatory framework, such as: (a) PBR Frameworks to move away from existing capital investment paradigm (e.g., a totex approach);⁸⁴ and (b) revenues to enable a future electric utility platform business model (e.g., provision of new services and value-added opportunities for customers and third parties).

Some of the topics noted above for Phase 2 may represent substantial material changes to the current regulatory framework. The commission's review of this Phase will also take into consideration the regulatory principle of gradualism. Accordingly, any prospective implementation of such changes would be phased in over prudent time periods. Potentially, some of the strategic and/or transformational PBR elements discussed in Phase 2 may not be actionable within the anticipated timeline of this proceeding. Nonetheless, the commission finds that there is value in creating a forum for parties to meaningfully deliberate

⁸⁴Under a totex approach, capital and operating expenditures are combined into one category: "total expenditures" or "totex" in determining revenue requirements. The utility is afforded a return on a predetermined percentage of totex, regardless of whether the utility's capital expenditures are higher or lower than that amount. This treatment seeks to balance the incentive to invest in capital versus non-capital projects.

on the future of electric utility regulation in Hawaii and further develop this framework for commission review.

Outside of Scope. Although the scope of this investigative proceeding is intentionally broad, the commission considers the following matter to be beyond that scope: alternative ownership models for the utilities.⁸⁵

VI.

NEXT STEPS

A.

Motions for Intervention or Participation

Any interested individual, entity, agency, or community or business organization may file a motion to intervene or participate without intervention in this docket. The commission advises that the investigation to be conducted in this docket will require detailed analysis and discussion of various technical, economic, and policy issues concerning PBR. Prospective intervenors or participants must be prepared to

⁸⁵At the request of the State Legislature, the Hawaii State Energy Office is embarking on a study to evaluate the costs and benefits of various electric ownership models, as well as the viability of various utility regulatory approaches, to aid Hawaii in achieving its state energy goals. The study will engage a wide range of stakeholders and perspectives across all islands and is expected to be completed by January 2019. See Hawaii State Energy Office, "Utility Model Study," available at <http://energy.hawaii.gov/utility-model>.

address these issues in depth and to meaningfully participate in the discussion to assist in the development of a sound record.

A motion to intervene or participate without intervention must be filed not later than twenty days from the date of this Order, pursuant to HAR § 6-61-57(3)(B). Motions to intervene or participate without intervention must comply with HAR Chapter 6-61, Rules of Practice and Procedure Before the Public Utilities Commission.

Lastly, the commission expects that all persons that appear before the commission or participate in meetings or conferences related to docket proceedings demonstrate the highest levels of professionalism, civility, and courtesy at all times. Such conduct and behavior is necessary for this docket to proceed in a manner that is efficient and productive for all those involved, and the commission will not tolerate any conduct or behavior from the parties or their representatives that is inconsistent with this standard.

B.

Solicitation of Comments on
Preliminary Scope and Proposed Process

In order to expedite the issuance of a preliminary statement of issues, the commission solicits movants, in their motions to intervene or participate, to include comments on both

the potential scope of issues to be addressed, as well as the procedural process employed in this docket. More specifically, the commission is interested in feedback on the proposed docket scope and process outlined above in Section V. The commission stresses that its preliminary scope and proposed process should be viewed as a prompt for feedback and could change in whole or in part upon review of Party comments.

Concurrent with a ruling on intervention, and informed by Parties' comments, the commission anticipates issuing a preliminary statement of issues and procedural schedule to govern the initial phase of this proceeding.

VII.

ORDERS

THE COMMISSION ORDERS:

1. Pursuant to HRS §§ 269-6 and 269-7, this proceeding is instituted to investigate performance-based regulation (PBR) as it relates to HECO, HELCO, and MECO.

2. HECO, HELCO, and MECO, and the Consumer Advocate are named as Parties to this docket.

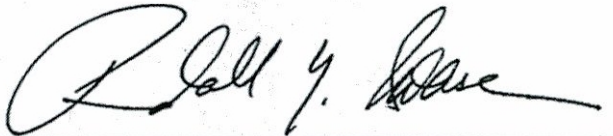
3. A motion to intervene or participate without intervention must be filed not later than twenty days from the date of this Order, pursuant to HAR § 6-61-57(3)(B). Motions to intervene or participate without intervention must comply with

HAR Chapter 6-61, Rules of Practice and Procedure Before the Public Utilities Commission.

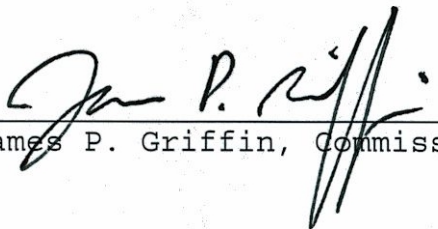
4. Prospective intervenors/participants, in their motion to intervene or participate, are encouraged to submit comments regarding the proposed scope and process outlined in Section V of this Order.

DONE at Honolulu, Hawaii APR 18 2018.


PUBLIC UTILITIES COMMISSION
OF THE STATE OF HAWAII

By 
Randall Y. Iwase, Chair

By 
Lorraine H. Akiba, Commissioner

By 
James P. Griffin, Commissioner

APPROVED AS TO FORM:


Matthew F. McDonnell
Commission Counsel

2018-0088.ljk

CERTIFICATE OF SERVICE

The foregoing order was served on the date of filing by mail,
postage prepaid, and properly addressed to the following parties:

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